METHOD AND SYSTEM FOR VERSION CONTROL IN A FAULT TOLERANT SYSTEM

ABSTRACT OF THE INVENTION

A method and system for performing software versioning between multiple controllers in a fault tolerant system. The fault tolerant system includes a storage system and multiple redundant controllers that provide access to the storage system. The storage system has stored thereon a preferred version of software to be used by the controllers. This software may be updated. The controllers each contain non-volatile memory. On boot, a controller compares the software version in its non-volatile memory to the preferred version in the storage system. If they are different (e.g., the software on the storage system was updated or the controller was updated with a non-preferred software version), then the controller copies the storage system version into its non-volatile memory and then re-boots. One controller is typically left operational while the other is re-booted for redundancy. Computer controlled versioning allows (1) lockstep software updates between the controllers based on a software version that may be associated with the storage system as a whole and (2) provides a central store from which the controllers may obtain the preferred software version. A special flash update mechanism is also described with respect to an implementation that uses flash memory as the non-volatile memory.